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Sub 1  
from the group consisting of magnesium oxide, magnesium hydroxide, mixtures of magnesium oxide and magnesium hydroxide and magnesium hydroxycarbonate, wherein said composition exhibiting a mean particle size of less than  $50\mu$  and a particle size slope of less than 5.

12. (Amended) A non-caking solid pulverulent reactive composition for the purification of a gas containing HCl, HF, sulfur oxide, nitrogen oxide, dioxins, furans, and admixtures thereof, consisting essentially of

sodium bicarbonate and

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a caking inhibitor for sodium bicarbonate,

said inhibitor is selected from the group consisting of lignite coke, a magnesium compound and admixtures thereof, wherein said magnesium compound is selected from the group consisting of magnesium oxide, magnesium hydroxide, mixtures of magnesium oxide and magnesium hydroxide and magnesium hydroxycarbonate;

wherein said composition is devoid of silica.

Please add the following claim 13

13. The process of Claim 1 wherein the particle size slope is defined by  $\sigma$ , wherein

$$\sigma = \frac{D_{90} - D_{10}}{D_{50}}$$

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wherein  $D_{90}$  represents the diameter at which 90% of the particles of the reactive composition (expressed by weight) have a diameter of less than  $D_{90}$ ;

wherein  $D_{50}$  represents the diameter at which 50% of the particles of the reactive composition (expressed by weight) have a diameter of less than  $D_{50}$ ; and

wherein  $D_{10}$  represents the diameter at which 10% of the particles of the reactive composition (expressed by weight) have a diameter of less than  $D_{10}$ .

Sub 1